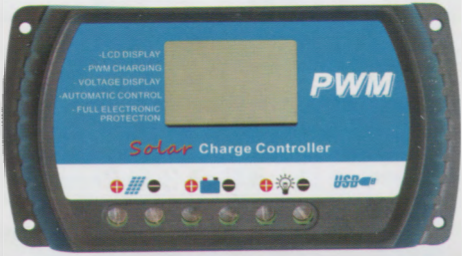
User's Manual



SAFETY INSTRUCTIONS

1.Make sure your battery has enough voltage for the controller to recognize the battery type before first installation.

2.The battery cable should be as short as possible to minimize loss.

3.The regulator is only suitable for lead acid batteries: OPEN,AGM, GEL it is not suited for nickel metal hydride, lithium ions or other batteries.

4.The charge regulator is only suitable for regulating solar modules. Never connect another charging source to the charge regulator.

PRODUCT FEATURES

1.Build-in industrial micro controller.

2.Big LCD display,with 5V USB charger

3. PWM charge management.

4.Build-in short-circuit protection,open-circuit protection,reverse protection,over-load protection.

5.Dual mosfet Reverse current protection ,low heat production.

SYSTEM CONNECTION

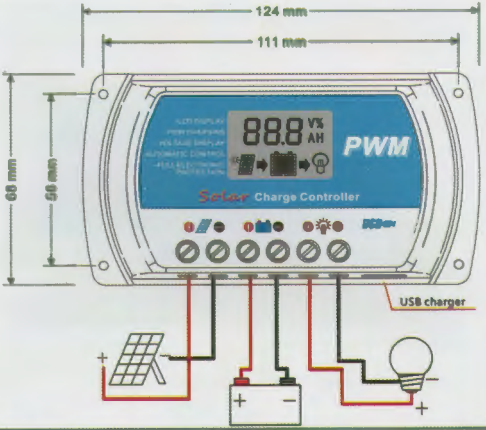
1.Connect the battery to the charge regulator - plus and minus.

2.Connect the photovoltaic module to the regulator - plus and minus.

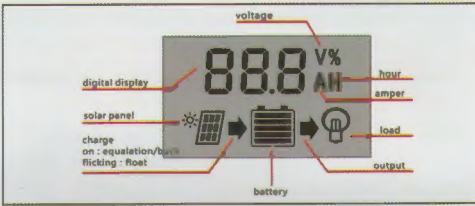
3. Connect the consumer to the charge regulator - plus and minus.

The reverse order applies when deinstalling!

An improper sequence order can damage the controller!



DISPLAY



12.3V	Display the battery voltage
	This iron will be on when solar panel voltage is higher than battery voltage,and it will start charging.
	Battery power iron
	If this iron flashes means the battery voltage is too low and the output will be cut off until the battery voltage raise to 12.6V
	Iron on means output is good.

TROUBLE SHOOTING

Situation	Probable cause	Solution
Charge icon not on when sunny	Solar panel opened or reversed	Reconnect
Load icon off	Mode setting wrong	Set again
	Battery low	recharge
Load icon slow flashing	Over load	Reduce load watt
Load icon slow flashing	Short circuit protection	Auto reconnect
Power off	Battery too low/reverse	Check battery/connection

TECHNICAL PARAMETER

MODEL	RTD1210	RTD1220	RTD1230	RTD4810	RLD4820
Batt voltage	12V/24V auto			48V	
Charge current	10A	20A	30A	10A	20A
Discharge current	10A	20A	30A	10A	20A
Max Solar input	<50V			<80V	
Buck charge	14.5V				
Float charge	13.7V				
Discharge stop	10.7V				
Discharge reconnect	12.6V				
USB output	5V/0.8A				
Self-consume	<10mA				
Control mode	PWM				
Operating temperature	-35~+60 ℃				
Size/Weight	150*78*35mm /150g				

*all red color voltage X2 ,X4 while using 24V /48V system.

*Product specifications are subject to change without prior notice.